

**REMARKS**

Applicants respectfully request reconsideration of the present application in view of the following remarks. Claims 28-49 and 51-58 are currently pending, of which claims 28, 46, and 58 are independent. In the final Office Action mailed August 13, 2007, the Examiner rejected claims 56-57 under 35 U.S.C § 112, first paragraph, as failing to comply with the enablement requirement. The Examiner rejected claims 28-49 and 51-58 under 35 U.S.C. § 103(a) as being unpatentable over DE Pat. Num. 27,10620 ("Siewerth") in view of DE Pat. Num. 3447836A1 ("Fasterding"). Following this response, claims 28-49 and 51-58 remain pending in this application. Applicants address the Examiner's rejections in turn.

**I. Rejections Under 35 U.S.C. § 112, First Paragraph**

The Examiner rejected claims 56-57 under 35 U.S.C. §112, first para., stating that "the specification does not reasonably provide enablement for penetrating ferromagnetic material without forming through holes in the base cover." Office Action, p. 2. The Examiner stated that "such claim language is confusing because if the resilient members penetrate the ferromagnetic material, clearly there is a through hole made in the cover and base of the material," and further that "if there is no indentation or through hole made, then the resilient member has not penetrated the ferromagnetic material." *Id.* Applicants respectfully disagree with the Examiner's characterization of the present application's disclosure and of the limitations recited in claims 56-57.

Claim 56 recites "wherein said electrical contact element interpenetrates said first ferromagnetic material of said base and said second ferromagnetic material of said

cover without forming through-holes in said base or said cover." Claim 57 recites "wherein said resilient members are suitable to penetrate said ferromagnetic material without forming through-holes in said base or said cover."

Contrary to the Examiner's statement, it is not necessary for the resilient members to form a through-hole in the ferromagnetic material in order for the resilient member to penetrate it. Applicants' specification expressly discloses exemplary structure for penetrating ferromagnetic material without forming through holes. Figures 2b and 2c depict a "resilient main body 7a, suitable to clamp and fasten together cover 6 and base 5 with an elastic force." Specification at 13, ll. 20-21. Further, "the two opposite arms of the main body 7a...are provided with one or more teeth 7c...for superficially piercing the material of the base 5 and the cover 6...." *Id.* at ll. 23-25. *Id.* at 4, ll. 20-25 (emphasis added). In addition, the specification discloses that "with 'material interpenetration' it is intended the condition achieved when one body undergoes plastic deformation so as to receive, within its boundaries, material of another body." *Id.* at p. 4, ll. 6-9 (emphasis added). Thus, at least these passages of Applicants' specification enable the recitations of claims 56 and 57.

As for the Examiner's statement that "if there is no indentation...made, then the resilient member has not penetrated the ferromagnetic material," the term "indentation" does not appear in either claim 56 or 57. Thus, because the claims do not recite the resilient members penetrating (or interpenetrating) the ferromagnetic material without forming indentations, Applicants' respectfully assert that the specification need not enable such a feature. Because the recitations of claims 56 and 57 are enabled by the

specification, Applicants therefore respectfully request that the rejection of those claims under §112 be withdrawn.

**II. 35 U.S.C. § 103(a) Rejections**

The Examiner rejected claims 28-49 and 51-58 under 35 U.S.C. § 103(a) as being unpatentable over DE Pat. Num. 27,10620 ("Siewerth") in view of DE Pat. Num. 3447836A1 ("Fasterding"). Applicants respectfully traverse the 35 U.S.C. § 103(a) rejection of independent claim 28 as being unpatentable over Siewerth in view of Fasterding. To establish a *prima facie* case of obviousness, "the prior art reference (or references when combined) must teach or suggest all the claim limitations." MPEP § 2142 (8<sup>th</sup> ed., rev. 5, Aug. 2006). Further, "[t]he identical invention must be shown in as complete detail as is contained in the...claim." MPEP § 2131, quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). Claim 28 recites, among other things, "electrical contact elements electrically connecting said base and said cover, wherein said electrical contact elements are selected from the group of metal fusion joints and resilient members suitable to penetrate said ferromagnetic metals." In the final Office Action, the Examiner concedes that Siewerth does not teach or suggest "electrical contact elements are selected from the group of metal fusion joints and resilient members suitable to penetrate said ferromagnetic material," as recited in claim 28. See final Office Action at 7, ¶ 2; 10 (top).<sup>1</sup> Instead, the Examiner relies on Fasterding as allegedly curing this deficiency by

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<sup>1</sup> Applicants note that while the Examiner acknowledges at page 7 of the final Office Action that Siewerth does not disclose the electrical contact elements being selected from the group of metal fusion joints and resilient members suitable to penetrate ferromagnetic material, the Examiner seems to assert that Siewerth at page 6 discloses joining a base and a cover with a metal fusion joint. As pointed out in Applicant's

disclosing "contact elements (6) made of ferromagnetic material..., which are capable of penetrating said ferromagnetic material." See *Id.* at ¶ 3.

Applicants respectfully disagree that Fasterding discloses contact elements capable of penetrating ferromagnetic material. Fasterding discloses a "Cable Trough for Rail Systems" having "trough elements that are covered by lids. Fasterding, Abstract.<sup>2</sup> "The principal idea of the invention is to arrange the cable trough system . . . [to] avoid[] the danger of damages due to atmospheric influences and washouts as a result of water backup." Fasterding at 7, ¶ 3. To that end, Fasterding discloses the use of "U-shaped trough elements and lids...made of steel plate." *Id.* at Abstract. Further, Fasterding explains that the lid is fastened "by screwing or with friction bolts that are inserted through the holes in the lids and the lateral flanges and form a non-positive connection." *Id.* at 8, ¶ 3.

First, because Fasterding expressly teaches inserting screws or friction bolts "through holes in the lids," Fasterding does not teach or suggest at least "resilient members suitable to penetrate said ferromagnetic material," as recited by claim 28. Contrary to the Examiner's statement that "clearly the drawings illustrate the pins (6) being inserted through the ferromagnetic material of the cover and base" (Final Office Action at 10, ¶ 1), Fasterding explains that the lid is fastened "by screwing or with

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January 3, 2007 response, nowhere does Siewerth disclose electrically connecting a base and a cover by metal fusion. To the contrary, Siewerth discloses at page 7 that "[t]here is no need to provide a fixed connection between the top covers 4 and the cage 1, such as welding." In the final Office Action, the Examiner has not pointed to any disclosure of Siewerth teaching a metal fusion joint between the base and cover.

<sup>2</sup> The Fasterding translation submitted with the Applicant's response to the March 12, 2007 Office Action included a typographical error in several locations in which the word "trough" was inadvertently spelled "through." Concurrently with this response, Applicants submit a corrected translation.

friction bolts that are inserted through the holes in the lids and the lateral flanges and form a non-positive connection." *Id.* at 8, ¶ 3. As a result, the friction pins disclosed in Fasterding do not penetrate material at all. Instead, the friction pins are inserted "through holes in the lids," each pin thereby penetrating only a void of air within holes of the lid.

Moreover, Applicants' specification distinguishes the inventive structure from prior art such as Fasterding, stating "if bolts with flat washers are employed, the electric contact between the washers and the possibly dirty, oxide coated surface of the conduit may be poor." Specification, p. 13, ll. 16-17. In addition, the specification further explains that "material penetration is important to guarantee coupling stability and to form a contact region that provides the required electromagnetic continuity between cover 6 and base 4." *Id.* at 13, ll. 27-29.

Second, Fasterding does not disclose that the friction pins are "resilient," as recited in claim 28. In the final Office Action, the Examiner asserts that "Fasterding clearly teaches that the joining of the base to the cover creates expansion joints, wherein the expansion joints can simultaneously develop thermal expansion" and that "clearly there cannot exist expansion with the resilient members elastically joining the base and cover." Final Office Action, p. 13, ¶ 4. The passages on which the Examiner relies, however, do not disclose expansion joints between the base and the cover. Instead, Fasterding provides that "to absorb thermal expansions, it is useful to provide expansion joints between the individual trough elements...in particular between the ends of adjacent groups of interconnected trough elements." Fasterding at 9, ¶ 2. In more detail, Fasterding explains that "an expansion joint 26 formed between the two

[trough] groups 22 and 23 allows for thermal expansion...." *Id.* at 11, ¶ 5 (referring to Figure 6). Therefore, the thermal expansion described in Fasterding occurs between the trough groups and along the longitudinal direction. Fasterding does not disclose expansion joints between the base and cover.

Thus, the thermal expansion described in Fasterding does not support the Examiner's inference that "if the joining of the cover with the base was a rigid joint, there would be no expansion." Final Office Action at 14, ¶ 1. As noted above, the lid and cover are made of steel. As a result, thermal expansion in the longitudinal direction would occur at the same rate in the lid as in the trough. Thus, a rigid member, e.g., a rigid friction pin or bolt, connecting the lid and trough would not hinder thermal expansion. Rather, a rigid pin or bolt would simply travel with the lid and trough in the longitudinal direction.

For at least the foregoing reasons, Fasterding and Siewerth, whether taken singly or in combination, fail to teach or suggest at least "electrical contact elements electrically connecting said base and said cover, wherein said electrical contact elements are selected from the group of metal fusion joints and resilient members suitable to penetrate said ferromagnetic metals," as recited in claim 28. Accordingly, Applicants respectfully submit that claim 28 is allowable over the art of record. Claims 29-45 and claim 57 depend on independent claim 28 and are therefore allowable for at least the same reasons.

The Examiner also rejected independent claim 46 as being obvious over the cited combination. Claim 46 recites, among other things, "coupling said base and said cover with an electrical contact element that penetrates said ferromagnetic material."

As noted above, Fasterding does not disclose that friction pins 6 penetrate ferromagnetic material. In particular, the friction pins are inserted “through holes in the lids,” each pin thereby penetrating no material, but rather only a void of air within holes of the lid. Accordingly, Applicants respectfully submit that claim 46 is allowable over the art of record. Claims 47-56 depend on independent claim 46 and are therefore allowable for at least the same reasons.

Additionally, Siewerth and Fasterding cannot properly be combined in the manner suggested by the Examiner because Siewerth teaches away from the combination suggested by the Examiner. MPEP 2141.02. The Examiner suggests modifying Siewerth’s disclosure with the friction pins disclosed in Fasterding. OA at 7. However, Siewerth states that “there is no need to provide a fixed connection between the top covers 4 and the cage 1, such as welding.” Siewerth at 7, ¶ 2. Accordingly, one of ordinary skill in the art would not be motivated to modify Siewerth with Fasterding’s friction pins. For this additional reason, a *prima facie* case of obviousness has not been established, and Applicants respectfully request that the rejection of claims 28-57 under §103 be withdrawn.

Independent claim 58 recites, among other things, “providing an electrical connection between said base and said cover having a conductance, per meter of length, of at least 150 Siemens/m by realizing a metal fusion between said base and said cover.” In rejecting claim 58, the Examiner did not assert that the art of record discloses this feature and has therefore failed to establish a *prima facie* case of obviousness with respect to claim 58. As discussed above in footnote 1, Siewerth does not disclose providing an electrical connection between a base and a cover by realizing

a metal fusion between them. While Siewerth discloses that individual bars of netting 3, which forms cage 1, may be joined at their intersection points, Siewerth does not disclose joining the cage 1 and the cover 4. To the contrary, Siewerth discloses that “[t]here is no need to provide a fixed connection between the top covers 4 and the cage 1, such as welding. Siewerth, at 7, ¶ 2. Accordingly, Applicants respectfully submit that claim 58 is in condition for allowance.

**III. New Claim**

In this Response, new independent claim 59 is presented. Claim 59 is similar to claim 28 as previously presented, but additionally recites “said ferromagnetic material having a maximum relative magnetic material greater than 1,000.” Support for this additional feature is found in the specification at least at page 10, lines 27-31. Applicants respectfully assert that claim 59 is in condition for allowance for the same reasons as claim 28, discussed above. Furthermore, neither Siewerth nor Fasterding discloses a conduit of ferromagnetic material having a relative magnetic permeability greater than 1,000.

Siewerth, for example, discloses that its cage is made of ferromagnetic material having relative permeability greater than 1. Siewerth translation at 5, Ins. 21-22. Siewerth’s disclosure of an extremely broad range relative permeability greater than 1 does not disclose providing a ferromagnetic material having a maximum relative magnetic permeability greater than 1,000 with “sufficient specificity” to anticipate this recitation of claim 59. MPEP 2131.03(II). As discussed in the specification, it is desirable that the conduit achieve a high shielding effect. See, e.g., Spec. at 1, Ins. 23-29; 12, Ins. 3-6; 21, Ins. 1-2. While a high shielding effect is readily achievable using a

material having a maximum relative permeability greater than 1,000, the same is not true with a material having a much lower maximum relative permeability.

Accordingly, Siewerth's disclosure of providing a conduit material having a magnetic permeability greater than 1 does not disclose "said ferromagnetic material having a maximum relative magnetic material greater than 1,000" with sufficient specificity to anticipate or render obvious claim 59. Fasterding, meanwhile, does not disclose that the conduit is made of a specific ferromagnetic material, much less one having a maximum relative magnetic permeability greater than 1,000. Accordingly, Applicants respectfully assert that claim 59 is in condition for allowance.

**IV. Conclusion**

In view of the foregoing remarks and amendments, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims. The preceding arguments are based only on the arguments in the Office Action, and therefore do not address patentable aspects of the invention that were not addressed by the Examiner in the Office Action. The claims may include other elements that are not shown, taught, or suggested by the cited art. Accordingly, the preceding argument in favor of patentability is advanced without prejudice to other bases of patentability.

If there are any fees due in connection with the filing of this Response, please charge the fees to our Deposit Account No. 06-0916. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should be charged to our deposit account.

Respectfully submitted,

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